

REMARKS

Claims 95, 96, 99-101 and 103-123 are pending in this application. Claims 106-118 are withdrawn from consideration.

Claim 95 has been amended to recite "wherein said recombinant polypeptide does not comprise further regions of ALK". The amended claim is fully supported by the specification (page 3, lines 7-15) and original claims.

Claims 106, 108-11, and 115 have been amended to remove dependency from cancelled claims 97 and 98. The amended claims are fully supported by the specification and original claims.

Claim 119 has been amended to replace the phrase "the peptide" with "the recombinant polypeptide". The amended claim is fully supported by the specification (page 3, lines 7-15) and original claims.

No new matter has been introduced. Applicant respectfully requests reconsideration in view of the following remarks. The Examiner's rejections and comments are addressed below in the order they were raised in the Office Action.

DETAILED ACTION

1. Applicant notes with appreciation that the amendment filed 29 January 2007 has been entered.
2. Applicant has amended claim 95 to include the full unabbreviated word "pleiotrophin".

Election/Restrictions

- 3-5. Applicant acknowledges that claims 106-118 are withdrawn. Applicants request that the requirement for withdrawn claims to be cancelled be held in abeyance as if the product claims are found allowable, method claims that depend from them or are otherwise include all of the limitations of the allowable product claims may be rejoined.

Withdrawn Rejections and Objections

6. Applicant notes with appreciation that rejections and objections of the previous Office Action, labeled A-B in this Office Action, have been withdrawn.

Rejection of Claims 95-105 under 35 USC § 102(b) (Morris et al.)

7. Claims 95-96 and 101 stand rejected as allegedly being anticipated by Morris et al (US Patent No. 5,770,421). The Examiner alleges that Morris et al. teaches a protein comprising residues 27-1030 of ALK protein. The Examiner contends that claim 95 as amended is drawn to a protein comprising a fragment consisting of residues 368-447 of ALK and that the use of open claim language allows for inclusion of additional amino acid residues on either side of the claimed sequence. Applicant respectfully traverses in view of the amended claim.

Applicant has amended claim 95 to recite "wherein said recombinant polypeptide does not comprise further regions of ALK". Support can be found throughout the specification (e.g. page 3, lines 7-15) and in the priority document (e.g. page 9, lines 19-23). Morris et al. do not disclose the PTN-binding domain of ALK. Morris et al. fail to disclose the claimed invention, i.e., Morris et al. do not teach the PTN binding fragment or the interaction of PTN and ALK. Prior to this filing, there was no recognition in the art that ALK was the receptor for PTN. Morris et al. generate antibodies to characterize ALK and to isolate ligands to the orphan receptor. However, Morris et al. fail to identify the ligand.

The standard for anticipating a claim is clearly outlined in MPEP 2131, and this standard is further supported by the Courts. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1978). "The identical invention must be shown in as complete detail as is contained in the claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

As shown above, Morris et al. do not disclose all the limitations of the present claims and thus fail to anticipate the claimed subject matter. Reconsideration and withdrawal of this rejection under 35 U.S.C. § 102(b) are respectfully requested.

Rejection of Claims 95-96 and 101-103 under 35 USC § 102(b) (Caughey et al.)

8. The Examiner has rejected claims 95-96 and 101-103 under 35 U.S.C. 102(b) as allegedly being anticipated by Caughey et al (1999. Journal of Chromatography B: Biomedical Sciences and Applications 728(1):49-57). Caughey et al. allegedly teach a polypeptide consisting of residues 280-480 of ALK. Applicant respectfully traverses.

Applicant has amended claim 95 to recite "wherein said recombinant polypeptide does not comprise further regions of ALK". Caughey et al. do not teach the PTN binding fragment or the interaction of PTN and ALK. As described above, it was not known in the art that ALK was the receptor for PTN until the instant application was filed. Although, Caughey et al. attempts to characterize ALK and develop tools to identify the ligand to this orphan receptor, this paper fails to identify the ligand. Thus no teachings in Caughey et al. lead to the PTN-binding domain.

To reiterate, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1978). Here, Caughey et al. do not disclose each and every element of the claim and thus fail to anticipate the claimed subject matter.

Reconsideration and withdrawal of this rejection under 35 U.S.C. § 102(b) are respectfully requested.

Rejections of Claims 95-96, 99-101, and 103-105 under 35 USC § 101

9. The Examiner has rejected claims 95-96, 99-101, and 103-105 for allegedly being directed to non-statutory subject matter. The Examiner contends that the claims are not limited to "isolated" proteins, but are sufficiently broad to encompass naturally occurring proteins residing in a human body. Applicant has amended claim 95 to state that the polypeptide is recombinant and therefore requires the hand of man. All other rejected claims depend on or refer to claim 95. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Rejections of Claim 119 under 35 USC § 112, Second Paragraph

10. The Examiner has rejected claim 119 for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner contends that there is insufficient antecedent basis for the limitation "the peptide" in the claim. Applicant has amended claim 119 to replace this phrase with "the recombinant polypeptide". Support can be found throughout the specification (e.g. page 3, lines 7-15). Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Rejection of Claims 95-96, 99-101 and 103-104 under 35 USC § 102(b) (Pulford)

11. The Examiner has rejected claims 95-96, 99-101 and 103-104 under 35 U.S.C. 102(b) as allegedly being anticipated by Pulford (1997. Blood 89:1394-1404). Pulford allegedly teaches human ALK protein, both isolated and in human tissues. Applicant respectfully traverses.

Applicant has amended claim 95 to recite "wherein said recombinant polypeptide does not comprise further regions of ALK ". Pulford. does not teach the PTN binding fragment or the interaction of PTN and ALK. As described above, it was not known in the art that ALK was the receptor for PTN until the instant application was filed. Although, Pulford attempts to characterize ALK and develop tools to analyze this orphan receptor, this paper fails to identify the ligand. Thus no teachings in Pulford leads to the PTN-binding domain.

To reiterate, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1978). Here, Pulford does not disclose each and every element of the claim and thus fail to anticipate the claimed subject matter.

Reconsideration and withdrawal of this rejection under 35 U.S.C. § 102(b) are respectfully requested.

Rejection of Claims 95-96, 99-101, 103-104 and 119-121 under 35 USC § 103 (Pulford)

12. The Examiner has rejected claims 95-96, 99-101, 103-104 and 119-121 under 35 U.S.C. 103(a) as allegedly being anticipated by Pulford in view of Lo et al. (1998. Protein Engineering 11:495-500). Pulford allegedly teaches human ALK protein, both isolated and in human tissues.

Lo et al. allegedly teach fusing a nucleic acid sequence encoding essentially any mammalian protein can be fused to immunoglobulin Fc region. Applicant respectfully traverses.

Claims 95-96, 99-101, 103-104 and 119-121 are not rendered obvious for the reasons the claims are not anticipated above regardless of what Lo et al. may say about fusing a nucleic acid sequence encoding essentially any mammalian protein can be fused to immunoglobulin Fc region. Lo et al. does not remedy this deficiency. None of the cited documents, thus, alone, or in any combination renders obvious the subject matter of claims 95-96, 99-101, 103-104 and 119-121. Reconsideration and withdrawal of this rejection under 35 U.S.C. § 103(a) are respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant submits that the pending claims are in condition for allowance. Early and favorable reconsideration is respectfully solicited. The Examiner may address any questions raised by this submission to the undersigned at 617-951-7000. Please charge any further fees or credit any overpayments to our Deposit Account No. 18-1945 from which the undersigned is authorized to draw, under order no. 102728-P01-004.

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Respectfully submitted,

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